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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/452,930	12/02/1999	CARL E. RADZIO JR.	79189CEB	1934

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EXAMINER	
HECKENBERG JR, DONALD H	
ART UNIT	PAPER NUMBER
1722	

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/452,930

Applicant(s)

RADZIO ET AL.

Examiner

Donald Heckenberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

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was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3, 4, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto et al. (U.S. Pat. No. 5,350,288; previously of record) in view of Nomura et al. (U.S. Pat. No. 5,156,754; previously of record) and Grendol (U.S. Pat. No. 4,540,534; previously of record).

Kimoto discloses an injection molding apparatus for making a molded part. Kimoto discloses the injection molding apparatus to comprise an injection molding machine for injecting resin (Fig. 17). The injection molding machine includes a screw cylinder (4) having a tip, a nozzle (9) at the tip, and a thread screw (3) advancable in the screw cylinder for injecting molten resin from the nozzle. The injection molding machine is structurally associated with a stationary portion and a movable portion forming a mold parting line (Fig. 17).

Kimoto further discloses, in the embodiment shown in Figure 12, a stationary cavity mold (37) and a movable core mold (34) having a first molten resin flow path/cavity (42). The first resin flow path has a terminal end portion distal from the

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nozzle of the apparatus (see Fig. 12). A second molten resin flow path (51) is arranged proximate to the movable core mold and proximate to the terminal end portion of the first molten resin flow path.

Kimoto provides a pressure relief valve (40b) having a movable pin (48) at the mold parting line (the parting line being between mold parts 33 and 34) proximate to the terminal end portion of the first mold path and proximate to the second molten resin flow path (see Fig. 12). The valve is operable between a blocking position wherein resin flow from the first resin flow path to the second resin flow path is blocked by the pin, and an unblocking position wherein resin flow from the first resin flow path to the second resin flow path is permitted by the pin (see Fig. 12, and cl. 8, ll. 22-28). The valve moves from the blocked position to the unblocked position in response to changes in molding cavity pressure associated with a change in resin material introduced in the apparatus such that the valve retains the resin material in the first resin flow path when the pressure is less than a predetermined value and releases resin material from the first resin flow path into the second resin flow path when the molding cavity pressure exceeds the predetermined value (see for example, cl. 7, l. 67 - cl. 8, l. 9).

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Kimoto does not disclose the injection mold to be made from cast epoxy and thermo-set materials. Kimoto also does not disclose the relief valve to be adjustable, and the mold to comprise a pair of ejector pins arranged therein for forceably separating the movable core mold from the first molten resin flow path.

Nomura discloses the making of injection molds from cast-epoxy and thermosetting material because of the ease of which the molds may be made (cl. 1, ll. 17-24). Nomura further discloses the injection mold to comprise ejector pins (12) for separating the molds upon completion of molding (see Fig. 1).

Grendol discloses an injection molding apparatus provided with a pressure relief and overflow valve (110). Like Kimoto, Grendol teaches the valve to comprise a pin (110) and a spring bias (114). Grendol further teaches the valve to comprise an adjustable stop for the purpose of setting the required molding pressure to open the valve and thereby relieve molding material and pressure from the molding cavity (see cl. 4, l. 55 - cl. 5, l. 6).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Kimoto as such to have made the mold from cast-epoxy and thermosetting material because it is known in the art

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that molds can easily be made from these materials as suggested by Momura. It also would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Kimoto to have two ejector pins because this would allow for the mold to open and the product removed from the mold as suggested by Nomura.

It further would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Kimoto as such to have made the pressure relief valve adjustable because this would allow for the setting of the valve to become activated when certain predetermined molding pressures are reached in the molding cavity as suggested by Grendol. Note further, such a modification to the apparatus of Kimoto amounts to making a known structure (the pressure relief valve) adjustable. Generally the provision of making an apparatus adjustable, where needed, is an unpatentable advance. In re Stevens, 212 F.2d 197, 101 USPQ 284 (Cust. & Pat. App. 1954).

5. Applicant's arguments filed October 8, 2004 have been fully considered but they are not persuasive.

Applicant's argue that Kimito does not disclose the operating pin of the valve to be placed at the mold parting

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line. Specifically, with respect to Figure 12 of Kimito, Applicant contends that the valve must be removed to access the second resin flow path to remove resin from the second resin flow path.

Applicant's interpretation of Figure 12 of Kimito is not correct. In this embodiment, the structure 42 is the mold cavity, which is defined between cavity mold 33 and core mold 34. The parting line in such an arrangement, is where cavity mold 33 and core mold 34 meet. As shown in the Figure, the valve pin 48 is set at the end of the cavity between cavity mold 33 and core mold 34 - thus the valve is disposed on the mold parting line as recited in claim 1 of the instant application.

Even if the valve of Kimito disclosed in the embodiment shown in Figure 12 must be removed to access the second resin flow path to remove resin from the second resin flow path as Applicant contends, this does not impart a patentable distinction to the claims of the instant application. Nothing in the claims precludes such a feature. Moreover, this feature as described in Applicant's arguments is related to the use of the apparatus, not necessarily any apparatus structure. The intended use of an apparatus is not germane to the issue of patentability of a claimed apparatus. In re Casey, 370 F.2d 576,

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580 152 USPQ 235, 238 (CCPA 1967); In re Otto, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963); MPEP § 2115.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (571) 272-1131. The

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examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Utech, can be reached at (571) 272-1137. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<<http://pair-direct.uspto.gov>>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

 4-7-5
Donald Heckenberg
Patent Examiner
A.U. 1722